AMENDMENT TO THE DRAWINGS

The attached sheets of drawings include changes to Figs. 7-11. These sheets, which include Figs. 6A-11, replace the original sheets including Figs. 6A-11.

Attachment: Replacement Sheets, 3 pages

REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Drawings

The Examiner has objected to the drawings as having repeated numerical and letter designations. The drawings and corresponding areas of the specification have been amended to clarify the labeled elements of the invention. Reconsideration of the drawings is respected.

Abstract

The Abstract has been objected to for exceeding 150 words. The Abstract has been amended so that it includes less than 150 words. Reconsideration and withdrawal of any objection to the Abstract is requested.

Priority Claim

Applicant requests that the Examiner acknowledge the priority claims made in the Application Data Sheet submitted with the initial application. This is available on the PAIR/PALM system file wrapper under the date entry 3/24/2005.

Claim Rejections

Claims 1-4, 6, 10-12, 16-20, 23-26 and 28-38 remain in the application. Claims 28-38 are new and consideration of these new claims is respectfully requested.

Claims 1-11 stand rejected under 35 U.S.C. §112, second paragraph, as

being indefinite. Specifically, the Examiner states that these method claims do not sufficiently lay out individual method steps. Independent claim 1 has been amended to provide distinct method steps. Remaining claims 2-4, 6 and 10-11 depend directly or indirectly from claim 1 and thus also include distinct method steps. Reconsideration and withdrawal of the rejection of claims 1-4, 6 and 10-11 under §112, second paragraph is respectfully requested.

Claims 12-16 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. 5,885,301 to Young (hereinafter Young). For the following reasons, the Examiner's rejection is traversed.

Young is directed to a tool bit and prosthetic removal device for use in ultrasonic removal of plastics. The removal device includes an annular (ring) body that can be securely chucked to a prosthetic device. An electromechanical transducer can be secured locally to the periphery of the body to excite the body. A stud portion of the driving end face of the transducer can be tightly threaded in engagement with a tapped bore at the base of the transducer seating bore of the body.

Amended claim 12 requires that the device include an amplitude-transforming and/or direction transforming element, and Young fails to disclose an element that functions in the manner claimed. Specifically, claim 12 requires that the amplitude-transforming and/or direction-transforming element transforms the amplitude or direction of the mechanical oscillation from the oscillation drive when the oscillation drive and treatment instrument or implant are coupled to the amplitude-transforming and/or direction-transforming element. Contrary to this requirement, in Young, when the prosthesis 19 is mounted in the ring 10 with the aid of the chuck or collet member

12 for establishing the operating configuration in which Young's device is used, the ring cannot act as an oscillator, and independent of the location at which the transducer is coupled to the ring 10, the prosthesis oscillates in the same direction as the transducer with an amplitude which is determined by the complete system. Thus, the ring 10 of Young does not meet all of the claim requirements of a amplitude-transforming and /or direction transforming element.

Reconsideration and withdrawal of the rejection of claim 12 under 35 U.S.C. §102(b) is respectfully requested.

Claim 16 depends directly from claim 12 and is believed to be allowable at least for the reasons stated above. Thus, reconsideration and withdrawal of the rejection of claim 16 is also respectfully requested.

Claim 19 stands rejected under 35 U.S.C. §102(b) as being anticipated by U.S. 5,456,686 to Klapper (hereinafter Klapper). For the following reasons, the Examiner's rejection is traversed.

Klapper is directed to an apparatus for removing an orthopedic prosthesis such as a femoral component of a hip joint replacement. The apparatus includes an ultrasonic transducer that is coupled to a self-holding taper on the neck of the prosthesis. The ultrasonic transducer may be any of a variety of known transducers. These may include electrostrictive, magnetostrictive or electromagnetic devices.

Claim 19, as amended, depends directly from claim 12. Klapper, like Young previously, fails to disclose an amplitude-transforming and/or direction-transforming element having all of the claimed features. Specifically, the transducer in Klapper does not disclose an amplitude-transforming and/or direction-transforming element that transforms the amplitude or direction of the mechanical oscillation from the

oscillation drive when the oscillation drive and treatment instrument or implant are coupled to the amplitude-transforming and/or direction-transforming element. Rather a common transducer is disclosed in Klapper, and it does not transform oscillation amplitude or direction in any manner.

Additionally, although the Examiner states that Klapper discloses a coupling surface 39 for contacting wound surfaces, as disclosed in Klapper, the coupling surface 39 couples to a transducer and not to a wound surface.

For at least the reasons stated above, reconsideration and withdrawal of the rejection of claim 19 is respectfully requested.

Method claims 1-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. 5,496,256 to Bock (hereinafter Bock). For the following reasons the Examiner's rejection is traversed.

Bock discloses an apparatus and method for ultrasonic bone healing in a dental application. The apparatus includes an ultrasonic power supply and piezoelectric transducer. The piezoelectric transducer is encapsulated in a case made of a flexible material that conforms to the surface of the soft tissue surrounding the jawbone. The transducer may be a multi-layer device.

Claim 1 has been amended to include specific method steps and to distinguish over the prior art. Claim 1 includes the step of arranging an amplitude-transforming and/or direction–transforming element between the treatment instrument or the implant and the oscillation drive, and wherein, for selecting one of a plurality of possible amplitude- and/or direction-transformations, providing the amplitude-transforming and/or direction–transforming element with a plurality of coupling locations wherein the oscillation drive is coupled to a selected one thereof. Bock does not teach

this step because Bock does not teach a transducer that transforms the direction or amplitude of generated oscillations. Rather, being a piezoelectric transducer, oscillations are generated directly therein and the attached encapsulant does nothing to augment or change the oscillations. Additionally Bock does not teach a transducer with a plurality of coupling locations.

For at least the reasons stated above, reconsideration and withdrawal of the rejection of method claims 1-4, 6 and 10-11 under §103(a) is respectfully requested.

Claims 17 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Young in view of U.S. 5,426,341 to Bory (hereinafter Bory). For the following reasons, the examiner's rejection is traversed.

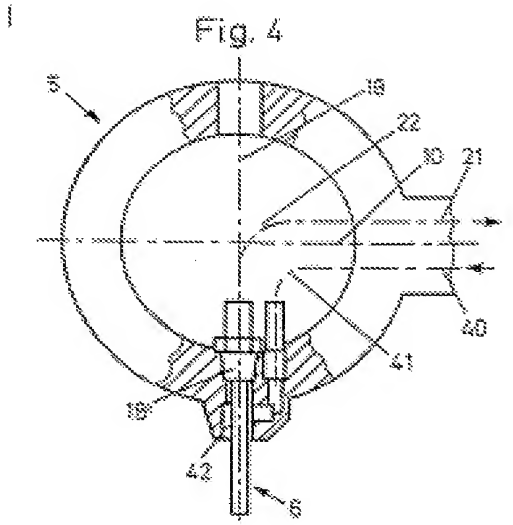
Bory is directed to a sonotrode for ultrasonic machining. The sonotrode is designed as an annular bending vibrator with a cylindrical outer surface, a coaxial cylindrical inner surface and an axis.

Even if combined in the manner proposed in the manner proposed by the Examiner, the present invention would not result. Further modification would be required. Regarding claim 17, which depends from amended claim 12, it has been previously stated that amended claim 12 requires the to device include an amplitude-transforming and/or direction transforming element, and Young fails to disclose an element that functions in the manner claimed. Specifically, claim 12 requires that the amplitude-transforming and/or direction-transforming element transforms the amplitude or direction of the mechanical oscillation from the oscillation drive when the oscillation drive and treatment instrument or implant are coupled to the amplitude-transforming and/or direction-transforming element. Contrary to this requirement, as previously stated, in Young, when the prosthesis 19 is mounted in

the ring 10 with the aid of the chuck or collet member 12 for establishing the operating configuration in which Young's device is used, the ring cannot act as an oscillator, and independent of the location at which the transducer is coupled to the ring 10, the prosthesis oscillates in the same direction as the transducer with an amplitude which is determined by the complete system.

Bory discloses a ring shaped oscillator which serves as a direction-transferring element, but there is no teaching of how a combination of Young and Bory could provide both a direction-transferring element with a plurality of coupling locations. As previously stated, the ring in Young cannot be made to transfer in a use configuration. Further selective coupling of the oscillation drive in different locations of Bory's ring-shaped oscillator is not possible as it would necessitate further openings in the ring and for each change dismantling and repositioning of the hose within the ring.

Regarding claim 18, the proposed combination fails to teach or suggest a treatment instrument being attached to the inner surface of a ring-shaped oscillatory and protruding thorugh an opposite opening therein, as required. Bory in Fig. 4 (shown below) shows a treatment element reaching through an opening 42 of a ring-shaped oscillator and being fastened in this opening, but this element is associated with the supply or removal of abradant from a treatment site. This element has nothing to do with coupling mechanical oscillation into a wound surface, as required by independent claim 12. The second opening shown in the instrument (at the top) serves from the introduction of a tool needed for fastening the treatment element. The treatment instrument does not protrude through this opening.



Reconsideration and withdrawal of the rejection of claims 17 and 18 under 103(a) is respectfully requested.

Claims 20-23 stand rejected as being unpatentable over Klapper in view of U.S. 4,601,289 to Chiarizzio (hereinafter Chiarizzio). For the following reasons, the Examiner's rejection is traversed.

Chiarizzio is directed to a proximal femoral trial prosthesis/rasp assembly for use in hip implant surgery. A novel handle assembly is easy to use, and is very effective in rigidly grasping the trial prosthesis/rasp while it is being used or removed from the prepared bone socket.

Claims 21-22 have been cancelled Claims 20 and 23 depend indirectly from claim 12. Klapper, like Young previously, fails to disclose an amplitude-transforming and/or direction-transforming element as claimed in claim 12. Specifically, the transducer in Klapper does not disclose an amplitude-transforming and/or direction-transforming element that transforms the amplitude or direction of the mechanical oscillation from the oscillation drive when the oscillation drive and treatment instrument or implant are coupled to the amplitude-transforming and/or direction-

transforming element. Rather a common transducer is disclosed in Klapper which does not transform oscillation amplitude or direction in any manner.

Chiarizzio does nothing to cure the deficiencies in Klapper, as Chiarizzio does not disclose any oscillating elements within its device.

Reconsideration and withdrawal of the rejection of claims 20 and 23 under §103(a) over Klapper and Chiarizzio is respectfully requested.

Claims 24-27 stand rejected as being unpatentable under 35 U.S.C. §103(a) as being unpatentable over Klapper in view of Chiarizzio and further in view of U.S. 4,468,200 to Munch (hereinafter Munch). For the following reasons, the Examiner's rejection is traversed.

Munch is directed to a mandibular implant with a rounded end at the bottom. The bottom also has serrated thread section and between the top and bottom are two annular notches and an annular expansion.

Claims 24-26 depend indirectly from claim 20. As stated above Klapper and Chiarrizio fail to disclose an amplitude-transforming and/or direction-transforming element having all of the claimed features. Additionally, Munch does not teach any sort of oscillating device.

Reconsideration and withdrawal of the rejection of claims 24-26 is respectfully requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. FRG-15988.

Respectfully submitted,

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